



# SEQUENCE LISTING

<110> Rommelchild, Max F.  
Larsen, Neils  
Kim, Kwan

<120> Melanocortin-4 Receptor Gene and Use as a Genetic Marker for Fat Content, Weight Gain, and/or Feed Consumption in Animals

<130> ISURF 2413

<140> 09/380,419

<141> 2000-07-24

<160> 30

<170> PatentIn version 3.1

<210> 1

<211> 746

<212> DNA

<213> Sus scrofa

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<221> variation

<222> (678)..(678)

<223> G/A

<400> 1

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cccagaatcc atactgtgtg tgcttcatgt ctacttttaa tttgtatctc atcctgatca      660
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 caattgcagt ggacaggtac ttactatct tctatgctct ccagtaccat aacattatga 300  
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 <222> (298)..(298)  
 <223> "X" can be any amino acid

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Leu Leu Glu Asn Ile Leu Val Ile Val Ala Ile Ala Lys Asn Lys Asn  
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Leu His Ser Pro Met Tyr Phe Phe Ile Cys Ser Leu Ala Val Ala Asp

35					40					45					
Met	Leu	Val	Ser	Val	Ser	Asn	Gly	Ser	Glu	Thr	Ile	Ile	Ile	Thr	Leu
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65					70					75					80
Asn	Val	Ile	Asp	Ser	Val	Ile	Cys	Ser	Ser	Leu	Leu	Ala	Ser	Ile	Cys
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Ser	Leu	Leu	Ser	Ile	Ala	Val	Asp	Arg	Tyr	Phe	Thr	Ile	Phe	Tyr	Ala
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Leu	Gln	Tyr	His	Asn	Ile	Met	Thr	Val	Lys	Arg	Val	Gly	Ile	Ser	Ile
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Ser	Cys	Ile	Trp	Ala	Ala	Cys	Thr	Val	Ser	Gly	Ile	Leu	Phe	Ile	Ile
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Tyr	Ser	Asp	Ser	Ser	Ala	Val	Ile	Ile	Cys	Leu	Ile	Thr	Met	Phe	Phe
145					150					155					160
Thr	Met	Leu	Ala	Leu	Met	Ala	Ser	Leu	Tyr	Val	His	Met	Phe	Leu	Met
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Ala	Arg	Leu	His	Ile	Lys	Arg	Ile	Ala	Val	Leu	Pro	Gly	Thr	Gly	Ala
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Ile	Arg	Gln	Gly	Ala	Asn	Met	Lys	Gly	Ala	Ile	Thr	Leu	Thr	Ile	Leu
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Phe	Tyr	Ile	Ser	Cys	Pro	Gln	Asn	Pro	Tyr	Cys	Val	Cys	Phe	Met	Ser
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His	Phe	Asn	Leu	Tyr	Leu	Ile	Leu	Ile	Met	Cys	Asn	Ser	Ile	Ile	Asp
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Glu Ile Ile Cys Cys Tyr Pro Leu Gly Gly Leu Cys Asp Leu Ser Ser  
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Arg Tyr Ala Pro Pro Glu Asn Asp Ile Xaa Val Ile Cys Asn Phe Ile  
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Asp Glu Asn Thr Ile Ala Leu  
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 <213> Sus scrofa

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Thr Leu Leu Asn Ser Thr Asp Thr Asp Ala Gln Ser Phe Thr Val Asn  
 35 40 45

Ile Asp Asn Val Ile Asp Ser Val Ile Cys Ser Ser Leu Leu Ala Ser  
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Ile Cys Ser Leu Leu Ser Ile Ala Val Asp Arg Tyr Phe Thr Ile Phe  
 65 70 75 80

Tyr Ala Leu Gln Tyr His Asn Ile Met Thr Val Lys Arg Val Gly Ile  
 85 90 95

Ile Ile Ser Cys Ile Trp Ala Val Cys Thr Val Ser Gly Val Leu Phe  
 100 105 110

Ile Ile Tyr Ser Asp Ser Ser Ala Val Ile Ile Cys Leu Ile Thr Val  
 115 120 125

Phe Phe Thr Met Leu Ala Leu Met Ala Ser Leu Tyr Val His Met Phe  
 130 135 140

Leu Met Ala Arg Leu His Ile Lys Arg Ile Ala Val Leu Pro Gly Thr  
 145 150 155 160

Gly Thr Ile Arg Gln Gly Ala Asn Met Lys Gly Ala Ile Thr Leu Thr  
 165 170 175

Ile Leu Ile Gly Val Phe Val Val Cys Trp Ala Pro Phe Phe Leu His  
 180 185 190

Leu Ile Phe Tyr Ile Ser Cys Pro Gln Asn Pro Tyr Cys Val Cys Phe  
 195 200 205

Met Ser His Phe Asn Leu Tyr Leu Ile Leu Ile Met Cys Asn Ser Ile  
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Ile Asn Pro Leu Ile Tyr Ala Leu Arg Ser Gln Glu Leu Arg Lys Thr  
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Phe Lys Glu Ile Ile Cys Cys Tyr  
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<210> 14  
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Ile Asp Pro Leu Ile Tyr Ala  
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<210> 15  
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<210> 16  
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Ile Asp Pro Phe Ile Tyr Ala Leu  
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Asp Pro Leu Ile Tyr Ala  
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<210> 18  
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Met Asp Pro Leu Ile Tyr Ala  
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Asp Pro Leu Ile Tyr Ala  
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Pro Leu Ile Tyr Ala Leu  
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<400> 24

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Val Ile Tyr Thr Ile  
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<210> 25  
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Ile Leu Tyr Ala Phe Leu  
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Cys Asn Ser Leu Ile Asn Pro Leu Ile Tyr  
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